

Claims

This listing of claims replaces any previous listing of claims.

1-39. (canceled)

40. (currently amended) A mold for molding a package for at least one die bonded to a substrate, the mold comprising a first mold portion that defines a package cover for encapsulating the at least one die and a portion of a surface of the substrate to which the die is bonded, and a second mold portion that defines a rib having a thickness at least as great as a solder bump thickness and that projects outwardly from a surface of the substrate opposite the surface of the substrate to which the at least one die is bonded.

41. (original) The mold of claim 40, wherein the first mold portion and the second mold portion define package covers and ribs for a plurality of die bonded to the substrate.

42. (new) The mold of claim 42, wherein the first mold portion is configured to define the package cover to encapsulate at least a portion of the surface of the substrate opposite the surface of the substrate to which the at least one die is bonded.

43. (new) The mold of claim 42, wherein the first mold portion is configured to contact the second mold portion.

44. (new) The mold of claim 42, wherein the first mold portion is configured to define the cover to encapsulate at least a portion of a substrate edge.

45. (new) The mold of claim 42, wherein the second mold portion is configured to encapsulate at least a portion of a substrate edge.

46. (new) The mold of claim 40, wherein the first mold portion is configured to contact the second mold portion.

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47. (new) A mold for molding a package for at least one die bonded to a substrate, the mold comprising a first mold portion that defines a package cover for encapsulating the at least one die and at least a perimeter portion of a surface to which the die is bonded, and a second mold portion that defines a rib that projects outwardly from a surface of the substrate opposite the surface of the substrate to which the at least one die is bonded.

48. (new) The mold of claim 47, wherein the first mold portion and the second mold portion define package covers and ribs for a plurality of die bonded to one or more substrates.

49. (new) The mold of claim 48, wherein the rib defined by the second mold portion has a thickness at least as great as a solder ball thickness.

50. (new) The mold of claim 47, wherein the package cover defined by the first mold portion is configured to encapsulate at least a portion of an edge of the substrate to which the at least one die is bonded.

51. (new) A mold for molding a package for a ball grid array assembly having a surface configured to receive solder bumps, comprising a first mold portion and a second mold portion that define a cavity that substantially covers the ball grid array assembly except at the surface configured to receive solder bumps.

52. (new) The mold of claim 51, wherein the cavity defined by the first mold portion and the second mold portion includes a rib portion configured to define at least one rib on the surface configured to receive solder bumps.

53. (new) The mold of claim 51, wherein the cavity defined by the first mold portion and the second mold portion includes a rib portion configured to define a plurality of ribs on the surface configured to receive solder bumps.

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54. (new) The mold of claim 51, wherein the cavity defined by the first mold portion and the second mold portion includes a perimeter portion associated with encapsulation of at least a portion of a perimeter of the surface configured to receive solder bumps.

55. (new) The mold of claim 54, wherein the perimeter portion of the cavity defines a rib that extends along a perimeter of the surface configured to receive solder bumps.

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